

COMBINATION BARBEQUE GRILL, SMOKER AND FIRE PIT

BACKGROUND OF THE INVENTION

Field of the Invention

[00001] The present invention relates to a combination barbecue grill, smoker and fire pit device. More particularly, the present invention relates to device that is easily changeable between a barbecue grill mode, a smoker mode and a fire pit mode.

Description of the Prior Art

[00002] Outdoor cooking and barbecue devices have been in existence for many years and are commonly used throughout the world. In addition, outdoor food smoker devices and outdoor fire pit devices have been in existence for many years and are also commonly used throughout the world. Assemblies combining any two of these devices into one assembly have been in existence for many years and are commonly used. Most of these devices include common, fundamental components, such as a body and/or housing for supporting and containing a heat source and for supporting and containing food items to be grilled, barbecued, smoked, etc.

[00003] One significant problem with the prior art devices is that none are able to accommodate all three of a barbecue grill mode, a smoker mode and a fire pit mode in a single compact, easy-to-use assembly. Moreover, none are able provide a combination assembly that can be easily transformed from one mode to another or that is easily transportable.

[00004] U.S. Patent No. 4,867,130 (Walker) discloses a barbecue apparatus having a housing. The apparatus can be adapted to be used with a smoker device, however the apparatus does not include a fire pit.

[00005] U.S. Patent No. 5,531,154 (Perez, III) discloses a combination outdoor cooker and smoker having a cooker assembly, a smoker enclosure detachably mountable on the cooker assembly and retention assembly comprising a plurality of retention brackets for alternate use as an outdoor cooker or smoker. The assembly does not include a fire pit assembly.

[00006] U.S. Patent No. 5,785,046 (Colla) describes a collapsible fire pit having a structure including two foraminous front and rear panels. The structure can also be used as a barbecue grill, but does not include a smoker capability.

[00007] U.S. Patent No. 5,937,768 (Atwood) teaches a portable multi-purpose outdoor fire container and hot water storage system. The structure can be used to grill food or as a smoker, but does not include the capability of being a fire pit. The system is connected to a hot water storage container for providing a heat source to the structure.

[00008] U.S. Patent No. 6,035,770 (Whitefield) teaches a barbecuing and smoking device for smoking and cooking meats and other foods. The device includes a housing with a base, a removable lid, at least one food rack mounted within the housing and a chimney mounted to the lid. The device also includes a heat shield positioned beneath a heat source, but does not have the ability to provide a fire pit.

[00009] U.S. Patent No. 6,289,795 (McLemore et al.) describes a cooking apparatus which is adaptable as either a smoking or grilling device. The reference does not include adaptability as a fire pit apparatus.

[000010] U.S. Patent No. 6,516,792 (McDonald) discloses a compact, multipurpose cooking apparatus for outdoor use. The apparatus lacks the versatility to also serve as a smoker and a fire pit apparatus.

[000011] U.S. Patent Application Publication No. 2002/0189603 A1 (Hsu) teaches a grill comprising a body and two lids. The grill is advantageous in that two sets of food items can be simultaneously grilled, even at two different temperatures, but also lacks the ability to be transformed into either a fire pit assembly or a smoker.

[000012] There is a need for an improved assembly having the ability and versatility to be easily transformed between any one of a smoker, a barbecue grill and a fire pit assembly.

BRIEF SUMMARY OF THE INVENTION

[000013] The present invention is a barbecue grill, smoker and fire pit combination assembly.

The assembly includes a base, a housing thereon, except in the barbecue grill mode, and a lid secured to the base for the barbecue grill mode or to the housing, the combination defining the smoker, grilling or heating compartment. Moveable grids are provided within the body for supporting food to be grilled or smoked and for supporting a heat source and smoke generating components. The combination assembly of the present invention is able to be easily transformed from one mode to another, can be easily stored and can be easily transported.

[000014] It is an object of the present invention to provide an assembly having a barbecue grill mode, a food smoker mode and a fire pit mode.

[000015] It is another object of the present invention to provide an assembly that can easily be transformed from any one of a barbecue grill mode, a food smoker mode and a fire pit mode to another of the foregoing modes.

[000016] It is yet another object of the present invention to provide a three-in-one assembly of the foregoing three modes that is compact, efficient to use and easily stored and transported.

[000017] It is still yet another object of the present invention to provide a three-in-one assembly of the foregoing three modes that is inexpensive.

[000018] The present invention can be easily transformed from any one of three operational modes to any other operational mode. In other words, the present invention can be used as any one of a smoker, a barbecue grill or a fire pit, and can easily and quickly be changed into any other operational mode. The present invention is advantageous in that it is easy to assemble and store, and can be easily transported to a different location.

[000019] These and other objects of the invention may occur to those skilled in the art from the description to follow and from the appended claims.

BRIEF DESCRIPTION OF THE DRAWINGS

[000020] Figure 1 is a front perspective view of the present invention in its barbecue grill assembly mode.

[000021] Figure 2 is a front perspective view of the barbecue grill assembly of the present invention with the lid in a raised position.

[000022] Figure 3 is a front perspective view of the present invention in its fire pit assembly mode.

[000023] Figure 4 is a perspective view of the fire pit assembly of the present invention with the central housing in a raised position.

[000024] Figure 5 is a front perspective view of the present invention in its smoker assembly mode.

[000025] Figure 6 is a perspective view of the transition between the fire pit assembly of the present invention and the smoker assembly of the present invention.

[000026] Figure 7 is a perspective view of the smoker assembly of the present invention with the cover in a raised position.

[000027] Figure 8 is a side, cut away view of the heat source basin support of the assembly of the present invention.

[000028] Figure 9 is a top view of the heat source basin support of the assembly of the present invention.

[000029] Figure 10 is a top view of the lid of the assembly of the present invention, in one operational mode.

[000030] Figure 11 is a top view of the lid of the assembly of the present invention, in an alternative operational mode.

[000031] Figure 12 is an exploded front perspective of the fire pit assembly of the present invention.

DETAILED DESCRIPTION OF THE INVENTION

[000032] The present invention is now described with reference to the drawings, wherein like reference numerals are used to refer to like elements throughout. In the following description, for purposes of explanation, numerous specific details are set forth in order to provide a thorough understanding of the present invention. It will be evident, however, to one skilled in the art that the present invention may be practiced without these specific details.

[000033] Referring now to Figures 1, 3 and 5, the three-in-one assembly according to the present invention is shown generally at numeral 10. Assembly 10 includes a base 12, a lid 14 and may further include either a central housing 16 or an alternative central housing 18, depending on the particular mode that is being employed. As demonstrated

in the figures and explained in greater detail below, three-in-one assembly 10 includes three different operational assemblies or modes: a barbecue grill assembly 20 (Fig. 1), a fire pit assembly 22 (Fig. 3) and a smoker assembly 24 (Fig. 5). It should be appreciated that base 12, lid 14 and housing 16 and 18 can have any conventional shape known in the art. However, for purposes of explanation, base 12, lid 14 and housing 16 and 18 are demonstrated having a substantially cylindrical shape with base 12 and lid 14 having appropriate closing components for closing the cylindrical shapes.

[000034] Turning now to Figures 1 and 2, barbecue grill assembly 20 will be explained in greater detail. As set forth above, barbecue grill assembly 20 includes base 12 and lid 14 secured thereon. Base 12 includes a body 26 having a substantially cylindrical wall 28 and a lipped annular rim 90 from which wall 28 downwardly extends, a plurality of support legs 30 extending downwardly from body 26, an access door 32 for providing access into the interior of body 26 and a bottom surface annular orifice 82. Of course it should be appreciated that orifice 82 may be omitted so that the bottom surface of body 26 is a continuous surface. There are preferably three legs 30 to provide stability to assembly 10. Access door 32 may either be pivotable relative to body 26 or removable from body 26 and preferably includes a rotatable handle or knob 34 for facilitating the opening and closing of access door 32. Access door 32 is able to be secured closed by rotating door 32 about a hinge apparatus 33 on cooperating portions of body 26 and door 32 through the urging of knob 34 in either a clockwise or counter-clockwise direction to a closed position, and thereby securing an interior latch (not shown) to maintain door 32 in the closed position.

[000035] Barbecue assembly 20 further includes a movable recessed heat source tray, support or basin 36 placeable inside base 12 at a first level A, which is preferably towards the bottom of body 26. A heat source basin support 76 is provided at the bottom of body 26 for supporting heat source basin 36 thereon. Alternatively, basin 36 may be supported within body 26 by way of any other manner conventional in the art, such as a plurality of supports extending inwardly from wall 28 or from the bottom of base 12, a plurality of grooves formed on the inside of wall 28, etc. Basin 36 supports a heat source within base 12, such as wood, charcoal or other combustible material. Basin 36 includes an annular rim 84 with a curved bottom wall 86 extending downwardly from rim 84 (Fig. 4).

[000036] As shown in Figures 8 and 9, heat source basin support 76 includes a flat upper face 82 defined by an annular rim 83 and a plurality of support legs 80. Each support leg 80 includes a raised support portion 84 raised above the level of face 82. Raised support portion 84 provides a support surface for heat source basin 36 thereon. Each raised support portion 84 radiates outwardly from about the center of heat source basin support 76, curves over and around rim 83 and extends downwardly into a leg portion 78 for supporting heat source basin support 76 inside body 26.

[000037] Referring back to figures 1 and 2, lid 14 includes a generally cylindrical sidewall 38, a curved top 40 and an annular rim 96 from which sidewall 38 upwardly extends. An accessible handle 42, a thermometer 68 and a ventilation apparatus 70 are also provided on lid 14. Although lid 14 is shown having a domed cylindrical shape, it should be appreciated that lid 14 can have any shape conventional in the art, but it should be coordinated so that base 12 and housing 16 or 18 have mating shapes so that lid 14 can be secured to base 12 or housing 16 or 18 by way of a flanged engagement, one or more

clips, or other manner known in the art. The flanged engagement will be explained in greater detail below. It should be appreciated that thermometer 68 can be any device known in the art for gauging the internal temperature of assembly 10.

[000038] Ventilation apparatus (Figs. 10 and 11) includes a rotatable door 71 having a plurality of spaces 75 thereon. A graspable tab or notch 72 secured to door 71 is provided for facilitating the manual rotation of door 71. A plurality of ventilation holes 74 are included on lid 14 which correspond in shape and placement to spaces 75. When ventilation apparatus 70 is in a closed position (Fig. 11), spaces 75 and ventilation holes 74 are not in alignment. In other words, ventilation holes 74 are fully covered by door 71. If the user of assembly 10 rotates door 71 so that ventilation apparatus 70 is in an open position (Fig. 10), spaces 75 and ventilation holes 74 are in alignment. Door 71 can also be rotated so that any portion of ventilation holes 74 is exposed in order to allow varying degrees of ventilation to lid 14. Ventilation apparatus 70 is included on lid 14 in order to provide a mechanism for ventilating assembly 10 of excess heat, smoke, etc. For example, if the user, by reading thermometer 68, feels that the temperature inside assembly 10 is too high, ventilation apparatus 70 can be placed in a more open position to allow release of excess heat, thereby cooling down the internal temperature of assembly 10. Alternatively, if a higher internal temperature is desired, ventilation apparatus 70 can be rotated in a more closed position, or closed altogether, thereby creating a build-up of heat inside assembly 10.

[000039] Referring again to Figures 1 and 2, barbecue grill assembly 20 further includes a grid 44 for supporting food to be grilled, cooked, barbecued, etc. Grid 44 is removable and able to be placed within base 12 at a second level B, which is preferably towards the top

of body 26. Grid 44 is supported within base 12 by any manner known in the art, such as by a plurality of supports secured to wall 28 by a set screw and nut assembly. It should be appreciated that grid 44 can be placed at any distance above heat source support 36 in order to provide variable cooking temperatures for the food items being cooked. Food items to be grilled are easily placed onto grid 44 for grilling. While grilling, lid 14 can be secured in place on top of base 12 in order to enclose food items therein in the manner set forth above.

[000040] Turning now to Figures 3 and 4, assembly 10 will be described having been transformed from barbecue grill assembly 20 to fire pit assembly 22. For assembly 10 to be used as a fire pit assembly 22, lid 14 is removed and a fire pit housing 16 is secured on base 12 by way of, for example, a flanged engagement. Fire pit housing 16 includes a cylindrical foraminous wall 46, an accessible door 48 which can be pivotable or removable relative to fire pit housing 16, an open, flanged upper end 50, an open, flanged lower end 52, a lower flange 92 (Fig. 12) and an upper flange 94 (Fig. 12). To form the aforementioned flanged engagement, lower flange 92 rests on lipped rim 90, the lip of lipped rim 90 preventing housing 16 from sliding off base 12. Rim 96 of lid 14 rests on flanged upper end 50, upper flange 94 preventing lid 14 from sliding off housing 16. It should be appreciated that while in barbecue assembly 20 mode, rim 96 rests securely on lipped annular rim 90 of base 14 and is unable to slide off base 14. In regard to accessible door 48, a hinge assembly 65, or a plurality of hinges, is provided about which door 48 can be rotated relative to housing 16, hinge assembly 65 having cooperating portions on both housing 16 and door 48. A latch assembly 64 is provided opposite from hinge assembly 65, latch assembly 64 having a latch 66 and a securing portion 67. Latch

66 may be secured to door 48 and securing portion 67 to housing 16, latch 66 and securing portion 67 able to cooperate to secure door 48 in a closed position.

[000041] As demonstrated in Figure 3, fire pit housing 16 is preferably foraminous, or includes a plurality of spaces, pores, orifices or foramen, so as to facilitate the flow of warmed air out of fire pit assembly 22 into the immediate surrounding environment.

[000042] Referring now to Figure 4, base 12, while used with fire pit assembly 22, includes movable heat source basin 36. Grid 44 is removed from base 12 and heat source basin 36 is moved from its location at point A to point B, the former location of grid 44, towards the top of base 12 to replace grid 44. Once moved into place at point B, fire pit housing 16 is secured onto base 12 above heat source basin 36 and lid 14 is placed on top of fire pit housing 16 and secured by a flanged engagement, clips, clasps and the like, but preferably in the same manner lid 14 is secured to base 12 in barbecue assembly 20, as explained above. A heat source, such as wood or coals, are placed into heat source basin 36 where they may be lighted.

[000043] Turning now to Figures 5, 6 and 7, assembly 10 is shown having been transformed from fire pit assembly 22 to smoker assembly 24. As smoker assembly 24, fire pit housing 16 is removed and a smoker housing 18 is placed on top of base 12 in place of fire pit housing 16 by way of, for example, a flanged engagement. The bottom end of housing 18 securely rests on lipped annular rim 90, in the same manner as housing 16 does above. As shown in Figures 5 and 6, smoker housing 18 includes a cylindrical wall 54, a pair of oppositely disposed handles 56, an open upper end 58 (Fig. 6) and an open lower end 60 (Fig. 6). As shown in Figure 7, heat source basin 36 is moved from point B at the top of body 26 to the bottom of body 26 at point A, the same location heat source

support 36 is in while assembly 10 is in barbecue grill assembly 20 mode. Grid 44 is secured at the top of smoker housing 18 at point C by way of, for example, a plurality of supports secured to smoker housing wall 54 by a set screw and nut assembly. Lid 14 can then be secured on top of smoker housing 18 in the same manner as lid 14 is secured to fire pit housing 16, such as a flanged engagement.

[000044] Smoker assembly 24 further includes at least one additional support basin 62 disposed within base 12, preferably at the top of base 12 at point B. Although more than one additional basin can be employed, smoker assembly 24 is shown with just one additional basin. Additional support basin 62 is preferably of the same configuration and structure as heat source support basin 36 and is placed inside base 12, below grid 44 but above heat source support basin 36. Additional basin 62 is able to support any other necessary or desirable material for facilitating the smoking of food, such as water or smoke generating wood chips, such as hickory or mesquite wood chips (not shown).

[000045] It should be appreciated that assembly 10 can further include any other components and features commonly employed with barbecue grills, smokers and fire pits, such as heat shields, chimneys, vents, or heat absorbers.

[000046] It should also be appreciated that smoker assembly 24 can be used as a steamer assembly for steaming clams, mussels, shrimp, vegetables, etc.

[000047] What has been described above are preferred aspects of the present invention. It is of course not possible to describe every conceivable combination of components or methodologies for purposes of describing the present invention, but one of ordinary skill in the art will recognize that many further combinations and permutations of the present invention are possible. Accordingly, the present invention is intended to embrace all

such alterations, combinations, modifications, and variations that fall within the spirit and scope of the appended claims.